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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,069	04/21/2005	Kenji Yamane	OGW-0363	6096

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RADER FISHMAN & GRAUER PLLC
LION BUILDING
1233 20TH STREET N.W., SUITE 501
WASHINGTON, DC 20036

EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/532,069

Applicant(s)

YAMANE ET AL.

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-13 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>042105</u> . | 6) <input type="checkbox"/> Other: ____. |

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1) Claim 3 is objected to because of the following informalities: In claim 3, "has a groove wall edge section which chamfered in the form of a circular arc in cross section" is grammatically incorrect. Appropriate correction is required.

2) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4) **Claims 1-4 and 7-12 are rejected under 35 U.S.C. 102 (a),(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over by Japan 711 (JP 2002-59711).**

Japan 711, directed to restraining uneven wear on a block due to turning, discloses a pneumatic tire having a directional tread pattern comprising a "narrow circumferential groove" 20 having a width of 2 mm or less, four circumferential grooves 10 wherein the outer circumferential grooves 10B have a width Wg of 4-12 mm. In figures 1 and 2, Japan 711 shows a shallow circumferential groove at the center C wherein this shallow circumferential groove has a width greater than that of the "narrow

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circumferential groove" 20. Japan 711 discloses inner blocks 14 defined by inclined grooves 11 extending from the inner circumferential groove 10A and shoulder blocks 12 defined by inclined grooves 11 extending from the outer circumferential groove 10B. The obtuse corner of the inner blocks 14 is formed with a chamfer 17'. The obtuse angle corner of the shoulder blocks 12 is formed with a chamfer 17. The intersection of the chamfer with the upper surface of the block is a curved line. This curved line is best seen in figure 3.

The claimed tire is anticipated by Japan 711's tire. The inclination angle of the groove wall surface of the block facing the circumferential groove is a maximum at the obtuse angle corner since the distance between the curved upper edge of the chamfer and the side of the block is a maximum at the obtuse angle corner. In any event: It would have been obvious to one of ordinary skill in the art to chamfer Japan 711's blocks (e.g. inner blocks 14) such that "groove wall surfaces located on both sides of the obtuse-angled corner portion of each of the blocks facing to the first circumferential groove are inclined such that the inclination angles thereof are gradually greater towards the obtuse-angled corner portion and are maximum at the obtuse-angled corner portion" (claim 1) / the inclination angles of parts of the groove wall surfaces in the obtuse-angled corner portion where the inclination angles are maximum are 10 to 40 degrees (claim 2) since Japan 711 teaches chamfering the obtuse angle corner portions of blocks along a curved line as shown in figure 3 so that uneven wear on the block due to turning is restrained. Japan 711's benefit of retraining uneven wear on a

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block due to turning corresponds to applicant's disclosed benefit of improving irregular wear created during turning.

As to claim 3, the edge between the chamfer and the upper surface of the block is curved.

As to claim 4, note circumferential grooves 10A (first circumferential grooves), circumferential grooves 10B (second circumferential grooves) and inclined grooves 11 (first lateral grooves).

As to claims 7 and 8, note figures 2 and 3. In any event: it would have been obvious to one of ordinary skill to locate the starting positions a and b of the chamfer on the acute angled corner portions sides as claimed depending on the desired size of the blocks in view of Japan 711's teaching to extend the chamfer along the entire circumferentially extending edge of the block such that its width at one acute corner is W_i and its width at the other circumferential end is W_o . It is noted that as width W_o increases relative to the block width, the distance of the starting position of the chamfer from the other acute angle corner decreases. As to claim 8, Japan 711's curved upper edge must be defined by at least one radius of curvature K. Claim 8 fails to require the arc line m to extend from position a to position b.

As to claims 9-11, note circumferential grooves 10B and inclined grooves 19.

As to claim 12, note the shallow circumferential groove at the center C.

5) Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 711 in view of Japan 609 (JP 6-270609).

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Japan 711, which is discussed above, is considered to anticipate claim 12. In any event: It would have been obvious to one of ordinary skill in the art to provide the center rib of Japan 711's directional tread pattern with a center groove having a width greater than either (a) the width (2 mm or less) for the narrow circumferential groove ("second circumferential groove") or (b) the width (4-12 mm) of the circumferential groove 10A (first circumferential groove) since Japan 609, directed to a directional tread having center ribs 6 for stability, suggests using a center circumferential groove 1 having a width such as 8 mm to improve wet performance (paragraph 14 of machine translation).

Allowable Subject Matter

6) Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Although groove portions convex towards the tire centerline are known per se as evidenced by Lippmann et al (US 2,878,852), Japan 104 (JP 62-261104) and Gerresheim et al (US 5,996,661), and Japan 613 (JP 8-142613), the prior art of record fails to suggest modifying Japan 711's circumferential grooves such that "each of the first circumferential grooves is composed of a plurality of circularly curved groove portions which extend in the tire circumferential direction, the groove portions being convex towards the tire centerline and connected to one another".

Remarks

7) The remaining references are of interest.


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8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki
January 1, 2007


STEVEN D. MAKI 1-4-07
PRIMARY EXAMINER